P O. Box 421 Eureka, Utah 84628 (801) 433-6804 FAX (801) 433-6803



DOGM MINERALS PROGRAM

North Lily Mining Company

DIV. OF OIL, GAS & MINING

October 10, 1995

State of Utah
Attn: Compliance and Monitoring Program
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4780

RE: Third Quarter Monitoring Report 1995

Dear Compliance and Monitoring Personnel:

In compliance with Part II of the Ground Water Discharge Permit No. 23000 issued to North Lily Mining Company in May 1991, please find enclosed:

- 1. Pad and pond sump logs for the third quarter of 1995
- 2. Well water analysis for third quarter of 1995
- 3. Spillway samples from the third quarter 1995

All analysis of solution taken from sump samples were composite and delivered to Rocky Mountain Geochemical Corp., in Salt lake City, Utah for analysis. The analytical method used to determine gold and silver values was an atomic absorption spectrometer and all analysis were preformed by Mr. Jim Cardwell of Rocky Mountain Geochemical. Values reported on the sump logs ie. - gold, silver and sodium cyanide levels are reported in parts per million, and the gallons, represent gallons in a 24 hour period.

The pad and pond sumps continue to be checked on a regular basis, but due to the reduced volume of solution in the system detectable levels are not often found. Only on days when solutions have been pumped from a sump are they recorded.

Well water samples were delivered to Chemtec, a Utah certified laboratory, on September 7, 1995 for analysis with a request that the water be analyzed per the specification required by the Division of Water Quality.

Spillway samples have been taken to monitor the reduction of metals and cyanide in the solution coming off the heap leach pads. This has been done to enable North Lily to better meet and comply with state and federal water quality standards. The following table outlines the progress to date on some of the metals and cyanide (all analysis are reported in mg/l):

Page 2 Third Quarter Monitoring Report 1995

PARAMETER	*GROUND WATE	ER	DET			
	STANDARD	JUL 1993	DEC 1994	MAR 1995	JUN 1995	SEP 1995
Fluoride as F	2.4	1.60	7.88	2.49	4.94	5.2
Arsenic as As	0.05	0.916	0.286	0.604	0.59	0.814
Barium as Ba	2.0	<.1	0.031	0.016	0.018	0.02
Cadmium as Cd	0.005	<.1	<.001	<.001	<.001	< 0.01
Chromium as Cr	0.1	<1	<.007	<.01	<.007	< 0.01
Copper as Cu	1.3	1110	430	340	283	255
Lead as Pb	0.015	<.2	0.155	0.088	0.066	0.100
*Mercury as Hg	0.002	0.141	0.255	0.388	0.0020	0.232
Selenium as Se	0.05	0.529	0.122	0.140	0.24	0.17
Silver as Ag	0.05	4.41	0.061	3.61	1.8	4.24
Zinc As Zn	5.0	0.381	0.661	0.093	0.500	0.19
Cyanide as CN-T	0.75	1480	579	344	256	300
Cyanide as CN-Wad	0.20	1264	N/R	77.6	239	291 194)
Cyanide as CN- Free	N/A	512	N/R	INTER	179	*COMMENT
рН	6.5 to 8.5	10.0	8.61	9.41	8.82	9.31

^{*} Administrative Rules For Ground Water Quality Protection - Effective Date of Last Revision - March 20, 1995

As the above table indicates, there was a slight increase in several metals and cyanide in the last quarter. This we believe is due to rinsing in areas that during the first and second quarters were difficult to reach. North Lily is pleased however that for the most part there is a downward trend in metals and cyanide in the solution coming off the heap leach pads.

Nature continues to help in the rinsing of the heap leach pads at North Lily's Silver City operation this year. The following table lists the moisture received by month to date this year (amounts are reported in inches):

PRECIPITATION LOG FOR 1995

DATE	MOISTURE AS RAIN	AMOUNT IN SNOW
January	1.115	17.75
February	0.220	16.00
March	2.355	3.50
First Quarter Total	3.690	37.25

^{*} Digested analyzed by AWAL

^{*} Note: Free Cyanide test experienced matrix interference. No reported value provide

Page 3 Third Quarter Monitoring Report 1995

DATE	MOISTURE AS RAIN	AMOUNT IN SNOW
April	2.095	10.00
May	5.065	0.00
June	1.445	0.00
Second Quarter Total	8.605	10.00
DATE	MOISTURE AS RAIN	AMOUNT IN SNOW
July	0.580	0.00
August	0.012	0.00
September	0.280	0.00
Third Quarter Total	0.872	0.00
Total to Date 1995	13.169	47.25

The amount of moisture received has helped enormously in the reduction of metals and cyanide in the solutions coming from the heap leach pads. It has also been a benefit because of the overall coverage on the heap leach pads that could only be obtained by moisture received in the form of rain and/or snow. Because of the amount of moisture received from nature this year no fresh water has been added to the system.

The portable carbon column plant added to the system in November of 1994, in which solutions coming from the pads are run through, is in continuous use. This is having a multi beneficial effect on the operation, several of which are; gold and silver values continue to be recovered, this has offset some of the monitoring costs, some of the base metals contained in the solution will be recovered making them easier to dispose of, and the complex wad cyanide compounds that have been building in the system are being broken down, all of which brings the solution closer to water quality standards.

The carbon plant was scheduled to be used through October 1995, but because of the slight increases in metals and cyanide, North Lily will continue to use the carbon plant during the fourth quarter of this year. At that time metals, cyanide and other complex compounds that exceed water quality standards will be evaluated to determine the most effective way to bring them into compliance with water quality standards.

It was North Lily's intention to start grading and contouring the heaps leach pads in the third quarter of 1995, but this has been postponed until early spring 1996.

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Rinsing of the pads will continue over the entire heap leach pad until water quality standards are met. After water quality standards are met it is proposed that the preg and barren ponds be filled in with a coarse gravel and capped with top soil, fertilized, mulched, and seeded. The preg and barren ponds could then serve as holding ponds should unwanted solution come from the graded and contoured pads at some point in the future. The overflow pond could be filled in and contoured as previously planned.

If you have questions and/or comments, please call.

Paul C. Spor or Eureka Office P.O. Box 421 Eureka, Utah 84628 801-433-6804 Phone 801-433-6803 Fax

Paul C. Spor St. George Office 390 South 600 East St. George, Utah 84770 801-634-1584 Phone/Fax/Messages

Sincerely.

Paul C. Spor General Manager

cc: Roger A. Foisy, Division of Water Quality Wayne Hedberg, Division of Oil, Gas, and Mining

Third	Quarter	1995	Sur	ne Lo			
DATE SUMP	POND	TIME	Au	Ag pH	NaCH	GALLONS	NAME
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	How 1		\ 	8.1	000	3.0	
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9/9 Rres	76	14:00	/ 	9.2	000	3.0	Johnny
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41		11		8.1	000	1.5	11
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9/28 Pres Berry Over	29 En 24	11:00		8.0 8.0 9.2 9.2	000 000 000 013 000	1.0 15 150 2.6 1.5	Johnny
9/28 Pres	29 En 24	11:00		8.0 8.0 9.2 9.2	000 000 000 013 000	1.0 1.5	Johnny

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DAIL	SUMP	POND	TIME	Au	Ag pH	NaCH	GALLONS	NAME
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	世1				8.1	.000	1.0	11
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* 1		11) —) 	8.0	000	2.6	- ''
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Overflow	١'.	(<u> </u>	8.2	.000	2.0	*1
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7/12 Preg	30	10:00		+-	8.9	.000	10.0	Troy
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overflow	<u> </u>			-{	8.0	.000	3.0	. 4
#				+	8.2	,000	2.0 4.0	- 11
47		")		-) -	8.1	.000	7.0	
7/15 Pres	30'	15:00		7	8.9	.000	7.0	Elwin
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Overflow	1'	" /)_	8.1	.000	3.0	11
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42		••			8.1	,000	1.0	11
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14		" (8.3	.000	2.0	4
# 2		· • • ((4	8.3	.000	4.0	и
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	29.5'	"	1	t^{-}	9.5	.011	5.0	
- Barren Overflow	1')	8.1	,000		
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# 2		11	1)	8.1	.000	0.5	
)		_ 			



ANALYTICAL LABORATORIES

To: NORTH LILY MINING CO. P.O. BOX 68 EUREKA, UT 84628

Date: 10/ 9/95

Lab #: 95-U032694

Project: SILVER CITY PROJECT

Sample Desc: WELL WATER/STORAGE INLET Date Sampled: 9/ 7/95

Date Submitted: 9/ 7/95

CERTIFICATE OF ANALYSIS

INORGANIC PARAMETERS		MRTHOD	analyst
Beryllium (T), as Ea, mg/L < 0.01	1 9/8/95 2 9/8/95 1 9/8/95 1 9/8/95 4 9/8/95 1 9/8/95 1 9/8/95 1 9/8/95 2 9/8/95 2 9/8/95 9/8/95 9/8/95 9/8/95 9/8/95	EPA 200.7	10 10 10 10 10 10 10 10 10

Approved By: Kursell Buckman

formula 1913



Date: 10/ 9/95

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To: NORTH LILY MINING CO. P.O. BOX 68 EUREKA, UT 84628

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Date Sampled: 9/7/95 Date Submitted: 9/ 7/95

CERTIFICATE OF ANALYSIS

PARAMETER INORGANIC PARAMETERS	RESULT	MDL	date Analyzed	метнор	Analyst
Nitrate/Nitrite-Nitrogen, mg/L PH, mg/L Phosphorus, Ortho, mg/L Sulfate, mg/L Total Dissolved Solids, mg/L Total Suspended Solids, mg/L Turbidity, NTU Antimony (T), as Sb, mg/L Arsenic (T), as As mg/L	151 < 1 124 8.47 8.56 144 894.0 < 0.002 0.002 0.008 0.86 7.59 < 0.02 93 567 < 2.5 0.32 < 0.05 < 0.05 0.07	1 0.5 0.002 0.1 5 0.0002 0.005 0.02 0.05 0.02 5 2.5 0.05 0.0	9/11/95 9/11/95 9/11/95 9/11/95 9/8/95 9/8/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/12/95 9/11/95 9/11/95 9/11/95 9/11/95 9/11/95 9/8/95 9/8/95 9/8/95 9/8/95	SM 2320B SM 2320B SM 2320B SM 2320B SM 2320B SM 2320B EPA 325.3 EPA 120.1 ASTM D2036 EPA 340.2 EPA 353.1 EPA 353.1 EPA 353.1 EPA 353.1 EPA 350.1 SM 4500 EPA 375.4 EPA 160.1 EPA 160.2 EPA 180.1 EPA 200.7 EPA 200.7 EPA 200.7	TM TH TH TH TH JO JO JO

Approved By: Bussell Buckman

Date: 10/10/95



To: NORTH LILY MINING CO. P.O. BOX 68 **EUREKA, UT 84628**

Lab #: 95-U032695

Project: SILVER CITY PROJECT

Sample Desc: SPILLWAY SAMPLE Date Sampled: 9/ 7/95
Date Submitted: 9/ 7/95

CERTIFICATE OF ANALYSIS

PARAMETER INORGANIC PARAMETERS	RESULT	MDI.	DATE ANALYZED	METHOD	ANALYST
Bicarbonate as HCO3, mg/L Carbonate as CO3, mg/L Hydroxide as OH, mg/L Alkalinity, Total, mg/L Anion, Cation,	554 171 < 1 329 298.0	1 1 1	9/11/95 9/11/95 9/11/95 9/11/95	SM 2320B SM 2320B SM 2320B SM 2320B	TM TM TM TM
Chloride, mg/L Conductance, Specific, umhos/cm Cyanide, Free, Cyanide (T), mg/L Cyanide, WAD, mg/L Fluoride, mg/L Hardness, EDTA Titration, mg/L Mercury, as Hg, mg/L	273.0 2,560 23,100 Comment 300 291 5.2 1,250 0.2320	0.5 0.002 0.002 0.002 0.5 5	9/8/95 9/8/95 10/10/95 9/12/95 10/10/95 9/13/95 9/12/95 9/21/95	EPA 325.3 EPA 120.1 ASTM D2036 ASTM D2036 ASTM D2036 EPA 340.2 EPA 130.2	eg eg di Tm
Nitrite, Nitrogen, mg/L Nitrate/Nitrite-Nitrogen, mg/L pH, Units Phosphorus, Ortho, mg/L Sulfate, mg/L Total Dissolved Solids, mg/L Total Suspended Solids, mg/L Turbidity, NTU Antimony (T), as Sb, mg/L	0.490 9.56 9.31 0.38 10,100 19,300 < 2.5 0.28 0.085	0.25 0.02 0.05 0.01 5 2.5 0.05	9/21/95 9/ 7/95 9/19/95 9/11/95 9/ 8/95 9/11/95 9/11/95 9/ 8/95 9/ 8/95	EPA 245.1 EPA 354.1 EPA 353.1 EPA 150.1 SM 4500 EPA 375.4 EPA 160.1 EPA 160.2 EPA 180.1 EPA 200.7	TH ST TM TM DI TM MA MA ST JO

D03

Date: 10/10/95

To: NORTH LILY MINING CO. P.O. BOX 68 EUREKA, UT 84628

Lab #: 95-U032695

Project: SILVER CITY PROJECT Sample Desc: SPILLWAY SAMPLE

Date Sampled: 9/7/95 Date Submitted: 9/7/95

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MDL	date Analyzed	METHOD	ANALYST
INORGANIC PARAMETERS					
Arsenic (T), as As, mg/L	0.814	0.02	9/ 8/95	EPA 200.7	JO
Barium (T), as Ba, mg/L	0.02	0.02	9/ 8/95	EPA 200.7	JO
Beryllium (T), as Be, mg/L	< 0.01	0.01	9/ 8/95	EPA 200.7	JO
Cadmium (T), as Cd, mg/L	< 0.01	0.01	9/ 8/95	EPA 200.7	JO
Calcium (T), as Ca, mg/L	421	0.2	9/ 8/95	EPA 200.7	၂ဝ
Chromium(T), as Cr, mg/L	< 0.01	0.01	9/ 8/95	EPA 200.7	JO
Copper (T), as Cu, mg/L	255	0.01	9/ 8/95	EPA 200.7	JO
Iron (T), as Fe, mg/L	0.02	0.04	9/ 8/95	EPA 200.7	JO
Lead (T), as Pb, mg/L	0.100	0.01	9/ 8/95	EPA 200.7	JO
Magnesium (T), as Mg, mg/L	4.8	0.1	9/8/95	EPA 200.7	JO
Manganese (T), as Mn, mg/L	0.05	0.01	9/ 8/95	EPA 200.7	JÓ
Nickel (T), as Ni, mg/L	0.97	0.01	9/ 8/95	EPA 200.7	JO
Potassium (T), as K, mg/L	288	0.1	9/ 8/95	EPA 200.7	JO
Selenium (T), as Se, mg/L	0.17	0.04	9/ 8/95	EPA 200.7	JO
Silver (T), as Ag, mg/L	4.24	0.005	9/ 8/95	EPA 200.7	JO
Sodium (T), as Na, mg/L	5,610	0.2	9/11/95	EPA 200.7	QL
Zinc (T), as Zn, mg/L	0.19	0.02	9/ 8/ 9 5	EPA 200.7	JO
Thallium (T), as Tl, mg/L	0.023	0.001	9/11/95	EPA 200.9	LH

NOTE: Free Cyanide test experienced matrix interference.
No reported value provided



P O. Box 421 Eureka, Utah 84628 (801) 433-6804 FAX (801) 433-6803



North Lily Mining Company

July 13, 1995

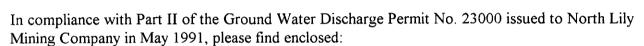
DOGM MINERALS PROGRAM FILE COPY

State of Utah

Attn: Compliance and Monitoring Program Division of Water Quality 288 North 1460 West P.O. Box 144870 Salt Lake City, Utah 84114-4780

RE: Second Quarter Monitoring Report 1995

Dear Compliance and Monitoring Personnel:



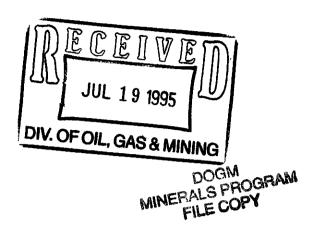
- 1. Pad and pond sump logs for the second quarter of 1995
- 2. Well water analysis for second quarter of 1995
- 3. Spillway samples from the second quarter 1993, forth quarter of 1994, and the first and second quarters of 1995

All analysis of solution taken from sump samples were composite and delivered to Rocky Mountain Geochemical Corp., in Salt lake City, Utah for analysis. The analytical method used to determine gold and silver values was an atomic absorption spectrometer and all analysis were preformed by Mr. Jim Cardwell of Rocky Mountain Geochemical. Values reported on the sump logs ie. - gold, silver and sodium cyanide levels are reported in parts per million, and the gallons, represent gallons in a 24 hour period.

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Page 2 Second Quarter Monitoring Report 1995

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Selenium as Se	0.05	0.529	0.122	0.140	0.24
Silver as Ag	0.05	4.41	0.061	3.61	1.8
Zinc As Zn	5.0	0.381	0.661	0.093	0.500
Cyanide as CN-T	0.75	1480	579	344	256
Cyanide as CN-Wad	0.20	1264	N/R	77.6	239
Cyanide as CN- Free	N/A	512	N/R	INTER	179
pН	6.5 to 8.5	10.0	8.61	9.41	8.82

^{*} Administrative Rules For Ground Water Quality Protection - Effective Date of Last Revision - March 20, 1995

As the above table shows North Lily is pleased to report significant reductions in most metals and cyanide in the past year.

Nature has helped in the rinsing of the heap leach pads at North Lily's Silver City operation this year. The following table lists the moisture received by month to date this year (amounts are reported in inches):

PRECIPITATION LOG FOR 1995

DATE	MOISTURE AS RAIN	AMOUNT IN SNOW
January	1.115	17.75
February	0.220	16.00
March	2.355	3.50
First Quarter Total	3.690	37.25

^{*} Digested analyzed by AWAL

Page 3 Second Quarter Monitoring Report 1995

<u>DATE</u>	MOISTURE AS RAIN	AMOUNT IN SNOW
April	2.095	10.00
April May	5.065	0.00
June	1.445	0.00
Second Quarter Tota	8.605	10.00
Total to Date 1995	12.295	47.25

The amount of moisture received has helped enormously in the reduction of metals and cyanide in solution coming from the pads. It has also been a benefit because of the overall coverage on the heap leach pads that could only be obtained by moisture received in the form of rain and/or snow. As solution levels coming from the pads are reduced by evaporation fresh water will be added to the system to continue the rinsing cycle.

The portable carbon column plant added to the system in November of 1994, in which solutions coming from the pads are run through, is in continuous use. This is having a multi beneficial effect on the operation, several of which are; gold and silver values continue to be recovered, this has offset some of the monitoring costs, some of the base metals contained in the solution will be recovered making them easier to dispose of, and the complex wad cyanide compounds that have been building in the system are being broken down, all of which brings the solution closer to water quality standards.

The carbon plant is currently scheduled to be used through October 1995. At that time metals, cyanide and other complex compounds that exceed water quality standards will be examined to determine the most effective way to bring them into compliance with water quality standards.

It is North Lily's intention to start grading and contouring the heaps leach pads in the third quarter of 1995. Rinsing of the pads will continue over the entire heap leach pad until water quality standards are met. After water quality standards are met it is proposed that the preg and barren ponds be filled in with a coarse gravel and capped with top soil, fertilized, mulched, and seeded. The preg and barren ponds could then serve as holding ponds should there be unwanted solution coming from the graded and contoured pads at some point in the future. The overflow pond could be filled in and contoured as previously planned.

Page 4 Second Quarter Monitoring Report 1995

If you have questions and/or comments, please call.

Paul C. Spor or Eureka Office P.O. Box 421 Eureka, Utah 84628 801-433-6804 Phone 801-433-6803 Fax

Paul C. Spor St. George Office 390 South 600 East St. George, Utah 84770 801-634-1584 Phone/Fax/Messages

Sincerely,

Paul C. Spor General Manager

cc: Roger A. Foisy, Division of Water Quality Wayne Hedberg, Division of Oil, Gas, and Mining

SUMPLOG - Second Quarter 1995

DATE SUMP POND TIME AU рΗ AG NaCN GALLONS NAME LEVEL 4/6 Prey 33 1300 1.0 13.5 8.9 .000 3.0 Troy Barren 33 .005 9.7 2.0 OverFlow දී.ප .000 5.0 spittury " 8.2 2.0 spirtuay " 8.7 .000 2.0 4/9 Areq 8.2 1500 1.5 .000 Donald Barven .006 Overflow 8.0 .006 8.0 # 1 Spill way " 8.1 .006 2.5 8.2 .000 2.0 11 Aliz Preg Troy .000 Barren 9.7 .008 1.0 averen 8.1 ,000 5.0 th spillman 8.3 .000 1.5 8.3 .000 1.0 1600 Jahnny 8.5 1.5 .000 Bawen 1.0 overflow 7.9 000 4.0 # 1 Spillney .000 2.0 .000 1.5 4/20 Prey 8.9 1600 1.5 000 Troy Barren 1.5 .006 OverFlow 8.0 3.0 000 # | Spillway 80 000 1.5 # 2 80 1.0 li .000 4/23 Aves 1300 9.0 .000 2.0 Elwin Barven 1.5 .009 Overflow 8.1 .000 1.0 #1 Spirlman 8.1 ,000 8.0 11 11 **છે**.૦ ,000 Alzh Preg 1450 0.6 ,000 2.0 Troy Barven 9.6 1.5 .004 Overflow ୫<u>.</u>2_ .000 7.0 #1 spirlway 8.3 .000 1.0 # 2 .000 2.0

SUMPLOG Second Querter 1995

DATE SUMP POND TIME AU AG pH NaCN GALLONS NAME LEVEL

4/30 Preg		1450	1.0	12/	9 1	///		Donald
Barven		11	1			.003		
- aver Flo						. 000		
# 1				7		.060		
# 7		14					-	<u> </u>
5/3 Avey		1300		7		.000		
Barren		11	7			.006		
are flow	51	la .	1)			6.0	11
# (Soillunu	11		1		.000		
# 2		-11	1				1.0	
5/7 Preg		1400	1	/		.000		
Barven		11	1 1			.000		Johnny
OverAow	51		1				2.5	
#1 <	Spidusu	11		 		.000		• • • • • • • • • • • • • • • • • • • •
~ 2	10	11			8.4	.006		11
No Prey		1550				.000		
Barren		1,			8.7 9.4	.000		Troy
avalan	51					.007		li .
# 5	211.00	11	-+		8.2	.000		
# ₂	t mand	11			8.4	.000	1.5	1,
1/13 Prey		1000			8.3		1.6	- 11
Rawen		"				,oto	2.5	Elwin
Quey flow	51	. ,,				.011	2.0	
avertion =	South No.	11			<u>84</u> 8.4	.000	1.5	14
#2	Shirms	NI .	1			.000	1.6	11
		1000)		<u>8.3</u>	.000		11
Prey Bowen						.000	1.5	Troy
overfau	s'	11 2			9.1	1000	2.0	
44.				1	8.1	,000	6.0	<u> </u>
#2	ilway_				8.2	.000	1.0	
20 Aveg		11			8. l	,006	2.0	11
Russes		1000	<u> </u>		8.9	_000		Donald
Burrey		"			9.1	.002		
21. 1	7.1			 	8.2	.000	1.5	
#2	- production	·· \	-		8.2	.000	5.0	41
	11	- 1)	8.1	.000	5.0	11

SUMPLOG - Second Quarter 1995

DATE SUMP	POND LEVEL		AU	AG	pН	NaCN	GALLONS	NAME
5/24 Frey	29'	11.00	1.0	13.0	8.8	.000	z.5	Troy
Barven	33 '	**			9.2	.003	30	13
overflow	51	H			8.1	.000	3.0	11
# (Spirlmay	44			8.0	,000	5.0	· i
42	"	11			8.0	.000	1.0	11
5/25 Prey	27'12'	1000			8.7	.006	2.0	Johnny
Barren	34'	n			9.1	.006	6.0	١,
overflow	<u></u>	ti		wa	8.3	.000	1.0	61
# 1	Spirmay	11			8.3	,000	1.0	14
± 2		\$1			8.3	.000	2.5	\$ 4
old Prey	30' 1	100			8.8	,000	3.0	Troy
Barren.	26'	11			9.0	.010	2,0	
overfow	2'	11			8.2	.000	5.0	11
# 1	Spilway	11			8.3	.000	2.0	h
世之	, 10	vi			8.1	.000	2.0	11
dib Przy	29' 1	300			8.7	,000	7.0	Elwin
Ranven	32'	11			9.1	_01(_	1.0	**
Quertous	1'	11			8.2	.000	5.0	ļ1
4 (_ بعمالتج	и			8.7	_000_	1.5	11
#2	· •	11			8.1	-000	1.0	9.4
of 21 Prag	28'	1400			5. 8	,000	2.0	Troy
Barren	31'	je.			9.z	.009	1.5	Troy
OverAas	11	1,			8.1	.000	1.0	11
#1	Spilluby	11			80	,000	8.0	
サ て	<u>'.,</u> (11			8.1	.000	1.0	N
0/29 Przy	27'	1550			8.9	.000	7.0	Donald
Burren	30'	41			9.1	.010	6.0	*
overflow	. 1'	"			ટ્ર.ા	.000	1.0	м
# (Spillupy	41			8.1	.000	7.0	'n
¥2	11	11			9.2	.000	1.5	ĸ
							-	



North Lily Mining TO:

P.O. Box 421

Eureka, Utah 84068

DATE: 6-30-95

SAMPLE ID: Lab #U027983 - Well Water Sink

DATE SAMPLED: 6-07-95 DATE SUBMITTED: 6-07-95

CERTIFICATE OF ANALYSIS

DETECTED	METHOD CODE	<u>DATE</u> ANALYZED	MDL
111	SM17 2320B	6-15-94	5.0
136	SM17 2320B	6-15-95	5.0
<1	SM17 2320B	6-15-95	1.0
67	Calculation	6-15-95	
<1	SM17 2320B	6-15-95	1.0
155	EPA 325.3	6-19-95	0.5
100	SM17 2320B	6-15-95	
889	EPA 120.1	6-13-95	5.0
<.002	ASTM D2036	6-12-95	0.002
<.02	EPA 340.2	6-14-95	0.02
291	EPA 130.2	6-19-95	5.0
0.911	EPA 353.1	6-14-95	0.01
8.04	EPA 150.1	6-13-95	-
<.02	SM17 4500E	6-08-95	0.02
99.5	EPA 375.4	6-12-95	5.0
536	EPA 160.1	6-13-95	5.0
<2.5	EPA 160.2	6-13-95	2.5
0.88	EPA 180.1	6-08-95	0.1
0.0074	EPA 200.7	6-09-95	0.003
<.005	EPA 200.9	6-09-95	0.005
0.067	EPA 200.7	6-09-95	0.01
<.001	EPA 200.7	6-09-95	0.001
<.001	EPA 200.7	6-09-95	0.001
62.5	EPA 200.7	6-09-95/	0.1
	111 136 <1 67 <1 155 100 889 <.002 <.02 291 0.911 8.04 <.02 99.5 536 <2.5 0.88 0.0074 <.005 0.067 <.001 <.001	111 SM17 2320B 136 SM17 2320B <1 SM17 2320B 67 Calculation <1 SM17 2320B 155 EPA 325.3 100 SM17 2320B 889 EPA 120.1 <.002 ASTM D2036 <.02 EPA 340.2 291 EPA 130.2 0.911 EPA 353.1 8.04 EPA 150.1 <.02 SM17 4500E 99.5 EPA 375.4 536 EPA 160.1 <2.5 EPA 160.2 0.88 EPA 180.1 0.0074 EPA 200.7 <.005 EPA 200.7 <.001 EPA 200.7	DETECTED METHOD CODE ANALYZED 111 SM17 2320B 6-15-94 136 SM17 2320B 6-15-95 <1



P.O. Box 421

Eureka, Utah 84068

DATE: 6-30-95

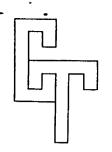
SAMPLE ID: Lab #U027983 - Well Water Sink

DATE SAMPLED: 6-07-95 DATE SUBMITTED: 6-07-95

CERTIFICATE OF ANALYSIS

7.			DATE	
PARAMETER	DETECTED	METHOD CODE	<u>ANALYZED</u>	MDL
Chromium as Cr, mg/l	<.007	EPA 200.7	6-09-95	0.007
Copper as Cu, mg/l	0.063	EPA 200.7	6-09-95	0.01
Iron as Fe, mg/l	0.17	EPA 200.7	6-09-95	0.01
Lead as Pb, mg/l	<.005	EPA 200.9	6-14-95	0.005
Magnesium as Mg, mg/l	34.7	EPA 200.7	6-09-95	0.1
Manganese as Mn, mg/l	<.01	EPA 200.7	6-09-95	0.01
*Mercury as Hg, mg/l	<.0002	EPA 245.1	6-13-95	0.0002
Nickel as Ni, mg/l	<.01	EPA 200.7	6-09-95	0.01
Potassium as K, mg/l	3.7	EPA 200.7	6-09-95	0.1
Selenium as Se, mg/l	0.0031	EPA 200.9	6-09-95	0.002
Silver as Ag, mg/l	0.0031	EPA 200.7	6-09-95	0.002
Sodium as Na, mg/l	62.9	EPA 200.7	6-09-95	0.1
Thallium as Tl, mg/l	<.001	EPA 200.9	6-09-95	0.001
Zinc as Zn, mg/l	0.065	EPA 200.7	6-09-95	0.01
Nitrite as NO ₂ -N, mg/l	<.005	EPA 354.1	6-08-95	0.005
Cation, meq/l	8.81			
Anion, meq/l	8.67			

^{* =} Digestate analyzed by AWAL.



ANALYTICAL LABORATORY

6100 S. STRATLER MURRAY, UTAH 84107 PHONE: (801) 262-7299 FAX: (801) 262-7378

TO: North Lily Mining

P.O. Box 421

Eureka, Utah 84068

DATE: 7-13-93

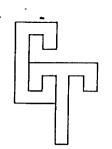
SAMPLE ID: Lab #U096704 - Silver City Joint Venture Main Spillway, 6-21-93

DATE SUBMITTED: 6-21-93

CERTIFICATE OF ANALYSIS

			DATE	
PARAMETER	DETECTED	METHOD CODE	<u>ANALYZED</u>	MDL
Alkalinity as $CaCO_3$, $mg/1$	1,127	SM17 2320B	6-22-93	5.0
Ammonia as NH_3-N , $mg/1$	277	SM17 4500G	7-06-93	0.2
Arsenic as As, mg/l	0.916	EPA 200.7	6-23-93	0.5
Barium as Ba, mg/l	<.1	EPA 200.7	6-30-93	0.1
Bicarbonate as HCO_3 , $mg/1$	1,155	SM17 2320B	6-22-93	5.0
Cadmium as Cd, mg/l	<.1	EPA 200.7	6-29-93	0.1
Calcium as Ca, mg/l	475	EPA 200.7	6-30-93	0.1
Carbonate as CO ₃ , mg/l	108	SM17 2320B	6-22-93	1.0
Chloride as Cl, mg/l	4,020	EPA 325.3	6-22-93	0.5
Chromium as Cr (Hex), mg/l	<1	SM14 307B	6-22-93	1.0
Chromium as Cr, mg/l	0.119	EPA 200.7	6-29-93	0.1
Conductivity, umhos/cm	20,200	EPA 120.1	6-28-93	5.0
Copper as Cu, mg/l	1,110	EPA 200.7	6-29-93	0.1
Fluoride as F, mg/l	1.60	EPA 340.2	6-21-93	0.1
Hardness as CaCO3, mg/l	1,198	EPA 130.2	6-30-93	5.0
Hydroxide as OH, mg/l	<1	SM17 2320B	6-22-93	***
Iron as Fe (Diss), mg/l	0.321	EPA 236.1	6-29-93	0.1
Iron as Fe (Tot), mg/l	0.097	EPA 200.7	6-29-93	0.01
Lead as Pb, mg/l	<.2	EPA 200.7	6-29-93	0.2
Magnesium as Mg, $mg/1$	2.91	EPA 200.7	6-30-93	0.1
Manganese as Mn, mg/l	<.1	EPA 200.7	6-29-93	0.1
Mercury as Hg, mg/l	0.141	EPA 245.1	6-28-93	0.0002
Nickel as Ni, mg/l	0.812	EPA 200.7	6-29-93	0.1

Jøel Workman



ANALYTICAL LABORATORY

6100 S. STRATLER MURRAY, UTAH 84107 PHONE: (801) 262-7299 FAX: (801) 262-7378

TO: North Lily Mining

P.O. Box 421

Eureka, Utah 84068

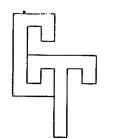
DATE: 7-13-93

SAMPLE ID: Lab #U096704 - Silver City Joint Venture Main Spillway, 6-21-93 DATE SUBMITTED: 6-21-93

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	METHOD CODE	<u>DATE</u> <u>ANALYZED</u>	MDL
$NO_3-N + NO_2-N$, mg/l	0.566	EPA 353.1	7-01-93	0.01
Phosphorus as P, mg/l	1.14	EPA 200.7	6-29-93	0.1
Potassium as K, mg/l	213	EPA 200.7	6-30-93	0.1
Selenium as Se, mg/l	0.529	EPA 200.7	6-29-93	0.4
Silica as SiO_2 , mg/l	70.1	EPA 370.1	6-30-93	0.1
Silver as Ag, mg/l	4.41	EPA 200.7	6-29-93	0.1
Sodium as Na, mg/l	4,860	EPA 200.7	6-30-93	0.1
Sulfate as SO ₄ , mg/l	6,500	375.4/4500D/C	7-01-93	5.0
Total Dissolved Solids, mg/l	16,900	EPA 160.1	6-23-93	5.0
Turbidity, NTU	2.60	EPA 180.1	6-22-93	0.1
Zinc as Zn, mg/l	0.381	EPA 200.7	6-29-93	0.1
pH Units	10.0	EPA 150.1	6-21-93	
Cyanide as CN (T), mg/l	1,480	D2036	7-01-93	0.002
Cyanide as CN (WAD), mg/l	1,264	D2036	7-05-93	0.002
Cyanide as CN (Free), mg/l	512	D2036	7-12-93	0.01

Joel Workman



ANALYTICAL LABORATORY

6100 S. STRATLER MURRAY, UTAH 84107 PHONE: (801) 262-7299 FAX: (801) 262-7378

TO: North Lily Mining, Co.

P.O. Box 421

Eureka, Utah 84068

DATE: 12-28-94

SAMPLE ID: Lab #U019481 - Main Spillway

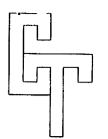
DATE SAMPLED: 12-8-94 DATE SUBMITTED: 12-8-94

CERTIFICATE OF ANALYSIS

PARAMETER	<u>DETECTED</u>	METHOD CODE	<u>DATE</u> ANALYZED	MDL
Alkalinity as CaCO3, mg/l	500	SM17 2320B	12-13-94	5.0
Bicarbonate as HCO3, mg/l	576	SM17 2320B	12-13-94	5.0
Carbonate as CO3, mg/l	16	SM17 2320B	12-13-94	1.0
Carbonate Solids, mg/l	300	Calculation	12-13-94	
Hydroxide as OH, mg/l	<1	SM17 2320B	12-13-94	
Chloride as Cl, mg/l	2,770	EPA 325.3	12-15-94	0.5
CO2, mg/l	430	SM 2320B	12-13-94	
Conductivity, umhos/cm	21,300	EPA 120.1	12-13-94	5.0
Cyanide as CN-T, mg/l	579	ASTM D2036	12-19-94	0.002
Fluoride as F, mg/l	7.88	EPA 340.2	12-15-94	0.1
Hardness as CaCO3, mg/l	1,110	EPA 130.2	12-11-94	5.0
$NO_3-N + NO_2-N$, mg/l	10.8	EPA 353.1	12-12-94	0.01
pH Units	8.61	EPA 150.1	12-9-94	
Orthophosphate as P, mg/l	0.344	SM17 4500E	12-9-94	0.01
Sulfate as SO4, mg/l	8,620	SM 4500	12-14-94	5.0
Total Dissolved Solids, mg/l	18,100	EPA 160.1	12-12-94	5.0
TSS, mg/l	9	EPA 160.2	12-12-94	2.5
Turbidity, NTU	0.86	EPA 180.1	12-9-94	0.1
Antimony as Sb, mg/l	0.060	EPA 200.7	12-12-94	0.003
Arsenic as As, mg/l	0.286	EPA 200.9	12-12-94	0.005
Barium as Ba, mg/l	0.031	EPA 200.7	12-12-94	0.01
Beryllium as Be, mg/l	<.001	EPA 200.7	12-12-94	0.001
Cadmium as Cd, mg/l	<.001	EPA 200.7	12-12-94	0.001
Calcium as Ca, mg/l	336	EPA 200.7	12-12/94	0.1

Approved By:

Del Workinm



ANALYTICAL LABORATORY

6100 S. STRATLER MURRAY, UTAH 84107 PHONE: (801) 262-7299 FAX: (801) 262-7378

DATE: 12-28-94

TO: North Lily Mining

P.O. Box 421

Eureka, Utah 84068

SAMPLE ID: Lab #U019481 - Main Spillway

DATE SAMPLED: 12-8-94

DATE SUBMITTED: 12-8-94

CERTIFICATE OF ANALYSIS

			DATE	
PARAMETER	DETECTED	METHOD CODE	ANALYZED	MDL
Chromium as Cr, mg/l	<.007	EPA 200.7	12-12-94	0.007
Copper as Cu, mg/l	430	EPA 200.7	12-12-94	0.01
Iron as Fe, mg/l	0.52	EPA 200.7	12-12-94	0.01
Lead as Pb, mg/l	0.155	EPA 200.9	12-12-94	0.005
Magnesium as Mg, mg/l	6.6	EPA 200.7	12-12-94	0.1
Manganese as Mn, mg/l	0.108	EPA 200.7	12-12-94	0.01
Mercury as Hg, mg/l	0.255	EPA 245.1	12-13-94	0.0002
Nickel as Ni, mg/l	0.89	EPA 200.7	12-12-94	0.01
Potassium as K, mg/l	237	EPA 200.7	12-12-94	0.1
Selenium as Se, mg/l	0.122	EPA 200.9	12-12-94	0.002
Silver as Ag, mg/l	0.061	EPA 200.7	12-12-94	0.002
Sodium as Na, mg/l	4,482	EPA 200.7	12-19-94	0.1
Thallium as Tl, mg/l	0.125	EPA 200.9	12-12-94	0.001
Zinc as Zn, mg/l	0.661	EPA 200.7	12-12-94	0.01

NOTE: Sample temp. when submitted was 8.8°C on ice.



TO: North Lily Mining, Co.

P.O. Box 421

Eureka, Utah 84068

SAMPLE ID: Lab #U023621 - Main Spillway

DATE SAMPLED: 3-15-95 DATE SUBMITTED: 3-15-95

CERTIFICATE OF ANALYSIS

PARAMETER	<u>DETECTED</u>	METHOD CODE	<u>DATE</u> <u>ANALYZED</u>	MDL
Alkalinity as CaCO3, mg/l	475	SM17 2320B	3-24-95	5.0
Bicarbonate as HCO3, mg/l	2,281	SM17 2320B	3-24-95	5.0
Carbonate as CO3, mg/l	173	SM17 2320B	3-24-95	1.0
Carbonate Solids, mg/l	285	Calculation	3-24-95	
Hydroxide as OH, mg/l	<1	SM17 2320B	3-24-95	
Chloride as Cl, mg/l	2,760	EPA 325.3	3-28-95	0.5
CO2, mg/l	292	SM 2320B	3-24-95	
Conductivity, umhos/cm	20,200	EPA 120.1	3-21-95	5.0
Cyanide as CN-T, mg/l	344	ASTM D2036	4-06-95	0.002
Fluoride as F, mg/l	2.49	EPA 340.2	3-21-95	0.1
Hardness as CaCO3, mg/l	1,170	EPA 130.2	3-31-95	5.0
$NO_3-N + NO_2-N$, mg/l	7.04	EPA 353.1	3-17-95	0.01
pH Units	9.41	EPA 150.1	3-16-95	
Phosphate as PO ₄ -T, mg/l	0.212	SM17 4500E	3-29-95	0.01
Sulfate as SO ₄ , mg/l	8,210	SM 4500	3-21-95	5.0
Total Dissolved Solids, mg/l	17,780	EPA 160.1	3-21-95	5.0
TSS, mg/l	<2.5	EPA 160.2	3-21-95	2.5
Turbidity, NTU	14	EPA 180.1	3-15-95	0.1
Antimony as Sb, mg/l	0.039	EPA 200.7	3-16-95	0.003
Arsenic as As, mg/l	0.604	EPA 200.9	3-16-95	0.005
Barium as Ba, mg/l	0.016	EPA 200.7	3-16-95	0.01
Beryllium as Be, mg/l	<.001	EPA 200.7	3-16-95	0.001
Cadmium as Cd, mg/l	<.001	EPA 200.7	3-16-95	0.001
Calcium as Ca, mg/l	406	EPA 200.7	3-16-95	0.1



P.O. Box 421

Eureka, Utah 84068

DATE: 4-7-95

SAMPLE ID: Lab #U023621 - Main Spillway

DATE SAMPLED: 3-15-95 DATE SUBMITTED: 3-15-95

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	METHOD CODE	<u>DATE</u> ANALYZED	WINT
Chromium as Cr, mg/l	<.01	EPA 200.7	3-16-95	MDL
Copper as Cu, mg/l	340			0.01
· - ·		EPA 200.7	3-16-95	0.01
Iron as Fe, mg/l	0.042	EPA 200.7	3-16-95	0.01
Lead as Pb, mg/l	0.088	EPA 200.7	3-16-95	0.005
Magnesium as Mg, mg/l	3.4	EPA 200.7	3-16-95	0.1
Manganese as Mn, mg/l	0.012	EPA 200.7	3-16-95	0.01
Mercury as Hg, mg/l	0.388	EPA 245.1	3-16-95	0.0002
Nickel as Ni, mg/l	0.92	EPA 200.7	3-16-95	0.01
Potassium as K, mg/l	237	EPA 200.7	3-16-95	0.1
Selenium as Se, mg/l	0.140	EPA 200.7	3-16-95	0.002
Silver as Ag, mg/l	3.61	EPA 200.7	3-16-95	0.002
Sodium as Na, mg/l	4,589	EPA 200.7	3-16-95	0.1
Thallium as Tl, mg/l	0.028	EPA 200.9	3-16-95	0.001
Zinc as Zn, mg/l	0.093	EPA 200.7	3-16-95	0.01
Cation, meq/l	226			
Anion, meq/1	258			
Cyanide as CN-WAD, mg/l	77.6	D2036-89	4-6-95	
Cyanide as CN-Free, mg/l	(Inter.)	D2036-89	4-6-95	

NOTE: Sample temp. when submitted was 11.7°C on ice.



P.O. Box 421

Eureka, Utah 84068

DATE: 6-30-95

SAMPLE ID: Lab #U027984 - Spillway Sample

DATE SAMPLED: 6-07-95 DATE SUBMITTED: 6-07-95

CERTIFICATE OF ANALYSIS

Dimer to the second sec					
PARAMETER	DETECTED	METHOD CODE	<u>DATE</u> <u>ANALYZED</u>	MDL.	
Alkalinity as CaCO3, mg/l	458	SM17 2320B	6-15-94	5.0	
Bicarbonate as HCO3, mg/l	400	SM17 2320B	6-15-95	5.0	
Carbonate as CO ₃ , mg/l	78	SM17 2320B	6-15-95	1.0	
Carbonate Solids, mg/l	275	Calculation	6-15-95		
Hydroxide as OH, mg/l	<1	SM17 2320B	6-15-95	1.0	
Chloride as Cl, mg/l	2,480	EPA 325.3	6-19-95	0.5	
CO_2 , mg/l	347	SM17 2320B	6-15-95		
Conductivity, umhos/cm	20,400	EPA 120.1	6-13-95	5.0	
Cyanide as CN-T, mg/l	256	ASTM D2036	6-12-95	0.002	
Fluoride as F, mg/l	4.94	EPA 340.2	6-14-95	0.02	
Hardness as CaCO3, mg/l	1,060	EPA 130.2	6-19-95	5.0	
$NO_3-N + NO_2-N, mg/1$	<.02	EPA 353.1	6-14-95	0.01	
pH Units	8.82	EPA 150.1	6-13-95		
Ortho-Phosphorus as P, mg/l	0.30	SM17 4500E	6-08-95	0.02	
Sulfate as SO ₄ , mg/l	8,230	EPA 375.4	6-12-95	5.0	
Total Dissolved Solids, mg/l	17,300	EPA 160.1	6-13-95	5.0	
TSS, mg/l	<2.5	EPA 160.2	6-13-95	2.5	
Turbidity, NTU	0.57	EPA 180.1	6-08-95	0.1	
Antimony as Sb, mg/l	0.052	EPA 200.7	6-09-95	0.003	
Arsenic as As, mg/l	0.59	EPA 200.9	6-09-95	0.005	
Barium as Ba, mg/l	0.018	EPA 200.7	6-09-95	0.01	
Beryllium as Be, mg/l	<.001	EPA 200.7	6-09-95	0.001	
Cadmium as Cd, mg/l	<.001	EPA 200.7	6-09-95	0.001	
Calcium as Ca, mg/l	380	EPA 200.7	6-09-95/	0.1	
	Annrove	d By. AM	YN Justin		



P.O. Box 421

Eureka, Utah 84068

DATE: 6-30-95

SAMPLE ID: Lab #U027984 - Spillway Sample

DATE SAMPLED: 6-07-95

DATE SUBMITTED: 6-07-95

CERTIFICATE OF ANALYSIS

<u>PARAMETER</u>	DETECTED	METHOD CODE	<u>DATE</u> ANALYZED	MDL
Chromium as Cr, mg/l	<.007	EPA 200.7	6-09-95	0.007
Copper as Cu, mg/l	283	EPA 200.7	6-09-95	0.007
Iron as Fe, mg/l	0.038	EPA 200.7	6-09-95	
Lead as Pb, $mg/1$	0.066	EPA 200.9	6-14-95	0.01
Magnesium as Mg, mg/l	4.8	EPA 200.7	6-09-95	0.005
Manganese as Mn, mg/l	0.077	EPA 200.7		0.1
*Mercury as Hg, mg/l	0.0020	EPA 245.1	6-09-95	0.01
Nickel as Ni, mg/l	0.85	EPA 200.7	6-13-95	0.0002
Potassium as K, mg/l	226	EPA 200.7	6-09-95	0.01
Selenium as Se, mg/l	0.24	EPA 200.7	6-09-95	0.1
Silver as Ag, mg/l	1.8		6-09-95	0.002
Sodium as Na, mg/l	4,950	EPA 200.7	6-09-95	0.002
Thallium as Tl, mg/l	<.4	EPA 200.7	6-09-95	0.1
Zinc as Zn, mg/l		EPA 200.9	6-09-95	0.4
Nitrite as NO ₂ -N, mg/l	0.50	EPA 200.7	6-09-95	0.01
	0.332	EPA 354.1	6-08-95	0.005
Cyanide as CN-WAD, mg/l	239	D2036-89	6-09-95	
Cyanide as CN-Free, mg/l	179	D2036-89	6-09-95	
Cation, meq/l	240			
Anion, meq/l	251			

* = Digestate analyzed by AWAL.